

First Inventor: Christopher J. Calhoun
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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Original) A resorbable thin membrane comprising a substantially uniform composition comprising a polymer, the polymer being capable of resorbing into the mammalian body within a period less than about 24 months from an initial implantation of the membrane into the mammalian body, the polymer having a biased molecular orientation in the membrane that is biased to at least one axis and having a viscosity property that is greater than about 1 g/dL, the membrane having a first substantially-smooth surface and a second substantially-smooth surface, and the membrane being non-porous, and the membrane having a thickness of about 0.001 mm to about 0.300 mm as measured between the first substantially-smooth surface and the second substantially-smooth surface.
2. (Original) The membrane of claim 1, wherein the polymer comprises a substantially amorphous polymer.
3. (Original) The membrane of claim 1 wherein the polymer comprises a polylactide.
4. (Original) The membrane of claim 1 wherein the polylactide comprises a copolymer of L-lactide and D,L-lactide.
5. (Original) The membrane of claim 1 wherein the polymer comprises a copolymer of lactide and epsilon caprolactone.

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6. (Original) The membrane of claim 3 wherein the molecular orientation of the polymer is biased toward one axis.
7. (Original) The membrane of claim 3 wherein the molecular orientation of the polymer is biased toward two axes.
8. (Original) The membrane of claim 3 being about 0.010 mm to about 0.100 mm thick.
9. (Original) The membrane of claim 3 being about 0.015 mm to about 0.025 mm thick.
10. (Original) The membrane of claim 3 being about 0.020 mm thick.
11. (Original) The membrane of claim 3 wherein the membrane has a glass transition temperature, and a thickness of the membrane increases by at least 5 times when the membrane is brought to its glass transition temperature.
12. (Original) The membrane of claim 3 wherein the membrane has a glass transition temperature, and a thickness of the membrane increases by at least 10 times when the membrane is brought to its glass transition temperature.
13. (Original) The membrane of claim 3 being impregnated with an additive selected from the group consisting of a chemotactic substance for influencing cell-migration, an inhibitory substance for influencing cell-migration, a mitogenic growth factor for influencing cell proliferation and a growth factor for influencing cell differentiation.
14. (Original) The membrane of claim 3 being contained in a sealed sterile packaging.

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15. (Original) The membrane of claim 3 further having at least one thick portion, each thick portion has a length equal to or shorter than the longest length of the membrane, a width greater than about 0.5 mm, and a thickness greater than about 2 times a thickness of a central area of the membrane.
16. (Original) The membrane of claim 15 wherein the thick portion protrudes from both of the two substantially-smooth surfaces and forms at least a segment of an edge of the membrane.
17. (Original) The membrane of claim 15 wherein a first thick portion forms at least a segment of a first edge of the membrane, and a second thick portion forms at least a segment of a second edge of the membrane.
18. (Original) The membrane of claim 15 wherein a thickness of the membrane increases more than 2 times when the membrane is brought to its glass transition temperature
19. (Original) The membrane of claim 17 further comprising a plurality of holes disposed along the thick portion.
20. (Original) The membrane of claim 3 further comprising a plurality of holes disposed along an edge of the membrane.
21. (Original) The membrane of claim 3 having a viscosity property greater than about 2 g/dL.
22. (Original) The membrane of claim 3 having a viscosity property of about 3 g/dL.
23. (Original) The membrane of claim 3 having a non-uniform shrinking characteristic.
24. (Original) The membrane of claim 3 having a directional shrinking characteristic.

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25. (Original) A resorbable thin membrane comprising a substantially uniform composition of a polymer extruded into a membrane, the membrane being capable of resorbing into the mammalian body within a period less than about 24 months from an initial implantation of the membrane into the mammalian body, the membrane having a viscosity property greater than about 1 g/dL, and further having a first substantially-smooth surface and a second substantially-smooth surface and being about 0.010 mm to about 0.030 mm thick as measured between the first substantially-smooth surface and the second substantially-smooth surface.

26. (Original) The membrane of claim 25, wherein the polymer comprises a substantially amorphous polymer.

27. (Original) The membrane of claim 25 further comprising at least one thick portion, the at least one thick portion having a length equal to or shorter than a longest length of the membrane, a width greater than about 0.5 mm, and a thickness greater than about 2 times the thickness of the membrane at a region other than the at least one thick portion.

28. (Original) The membrane of claim 27 wherein the thick portion protrudes from both of the two substantially-smooth surfaces and forms at least a segment of an edge of the membrane.

29. (Original) The membrane of claim 27 wherein a first thick portion forms at least a segment of a first edge of the membrane, and a second thick portion forms at least a segment of a second edge of the membrane.

30. (Original) The membrane of claim 27 wherein the thick portion is effective to provide rigidity to the membrane.

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31. (Original) The membrane of claim 27 further comprising a plurality of holes disposed along the thick portion.

32. (Original) The membrane of claim 25 wherein the membrane is non-porous and comprises polylactide.

33-52. Cancelled

53. (New) A resorbable thin membrane comprising a substantially uniform composition comprising a polymer, the polymer being capable of resorbing into the mammalian body within a period less than about 24 months from an initial implantation of the membrane into the mammalian body, the polymer comprising a polylactide and having a biased molecular orientation in the membrane that is biased to at least one axis and having a viscosity property that is greater than about 1 g/dL, the membrane having a first substantially-smooth surface and a second substantially-smooth surface, and the membrane being non-porous, and the membrane having a thickness of about 0.001 mm to about 0.300 mm as measured between the first substantially-smooth surface and the second substantially-smooth surface, wherein the membrane has a glass transition temperature, and a thickness of the membrane increases by at least 5 times when the membrane is brought to its glass transition temperature.

54. (New) A resorbable thin membrane comprising a substantially uniform composition comprising a polymer, the polymer being capable of resorbing into the mammalian body within a period less than about 24 months from an initial implantation of the membrane into the mammalian body, the polymer comprising a polylactide and having a biased molecular orientation in the membrane that is biased to at least one axis and having a viscosity property that is greater than about 1 g/dL, the membrane having a first substantially-smooth surface and a second substantially-smooth surface, and the membrane being non-porous, and the membrane

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having a thickness of about 0.001 mm to about 0.300 mm as measured between the first substantially-smooth surface and the second substantially-smooth surface, wherein the membrane has a glass transition temperature, and a thickness of the membrane increases by at least 10 times when the membrane is brought to its glass transition temperature.

55. (New) A resorbable thin membrane comprising a substantially uniform composition comprising a polymer, the polymer being capable of resorbing into the mammalian body within a period less than about 24 months from an initial implantation of the membrane into the mammalian body, the polymer comprising a polylactide and having a biased molecular orientation in the membrane that is biased to at least one axis and having a viscosity property that is greater than about 1 g/dL, the membrane having a first substantially-smooth surface and a second substantially-smooth surface, and the membrane being non-porous, and the membrane having a thickness of about 0.001 mm to about 0.300 mm as measured between the first substantially-smooth surface and the second substantially-smooth surface, the membrane further having at least one thick portion, each thick portion having a length equal to or shorter than the longest length of the membrane, a width greater than about 0.5 mm, and a thickness greater than about 2 times a thickness of a central area of the membrane, wherein a thickness of the membrane increases more than 2 times when the membrane is brought to its glass transition temperature